

CLAIMSSub 4⁵
1.

A changer apparatus for information discs, comprising

- a stacking unit for stacking at least two information discs in at least two stacking positions,

- a read/write unit for reading information stored on the information discs and/or writing information on the information discs in a play position,

an eject position being provided in which an information disc can be removed from the apparatus,

characterized in that

transport means have been provided for the transport of the information discs from the eject position into a loading position of the stacking unit along a curve-shaped loading path.

2. A changer apparatus as claimed in Claim 1, characterized in that the play position has been provided between the eject position and the loading position.

3. A changer apparatus as claimed in Claim 1, characterized in that the play position is offset from the direct connecting line between the loading position and the eject position.

4. A changer apparatus as claimed in Claim 1, characterized in that the play position is disposed on the loading path.

5. A changer apparatus as claimed in Claim 4, characterized in that a first transport mechanism has been provided for the transport of the information discs between the eject position, the play position and the loading position, and a second transport mechanism has been provided for the transport of the information discs into the stacking positions of the stacking unit, the first transport mechanism being adapted to move the information discs in the loading plane and the second transport mechanism being adapted to move the information discs in a stacking direction oriented vertically with respect to the loading plane.

6. A changer apparatus as claimed in Claim 5, characterized in that the first transport mechanism comprises at least a first and a second guide for the disc edge of the information disc, which guide is grooved and is movable in the loading plane, the second guide comprising at least one rotationally drivable first transport wheel.

7. A changer apparatus as claimed in Claim 6, characterized in that the first

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guide is a passive supporting guide,

there has been provided a third guide comprising a second transport wheel,

there has been provided a passive supporting guide as a fourth guide,

the first, the second, the third and the fourth guide comprise pivotal arms which are

5 supported at one end and which are pivotable in the loading plane,

the first, the second, the third and the fourth guide are pre-loaded towards the curve-shaped loading path,

the first transport wheel is essentially adapted to move the information discs between the

eject position and a transfer position and the second transport wheel is essentially adapted to

10 move the information discs from the transfer position into the loading position.

8. A changer apparatus as claimed in Claim 7, characterized in that the first and the third guide are mounted on a common pivot.

9. A changer apparatus as claimed in Claim 1, characterized in that the read/write unit is movably supported on a chassis plate of the apparatus.

15 10. A changer apparatus as claimed in Claim 1, characterized in that the read/write unit comprises a base plate and a laser mounting plate, the base plate and the laser mounting plate are coupled by means of dampers, the base plate is slidably mounted on the chassis plate, and the laser mounting plate carries a clamping device for clamping the information disc in the play position and an optical unit for reading information stored on the
20 information disc.

11. A changer apparatus as claimed in Claim 1, characterized in that the read/write unit is movable into the play position in the vertical direction.

12. A changer apparatus as claimed in Claim 7, characterized in that in the play position the first, the second, the third and the fourth guide are pivoted away from the
25 disc edge of the information disc, and the pivoting away of the guides is controlled by means of the base plate of the read write unit or a sliding plate.

13. A changer apparatus as claimed in Claim 1, characterized in that the stacking unit comprises at least two holder compartments for holding one information disc each,

30 the holder compartments are coupled to at least one threaded spindle and the holder compartments are movable into a vertical direction by rotation of the spindles, there have been provided an upper stacking zone and a lower stacking zone of the stacking unit for stacking the holder compartment, the loading position has been provided in a central zone between the upper and the lower

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~~stacking zone,~~

one of the holder compartments is each time movable into the loading position by rotation of the spindles, and the transport means are adapted to move the information disc from the holder compartment, which is in the loading position, into the play position and into the eject
5 position.

14. A changer apparatus as claimed in Claim 13, characterized in that in the axial direction of the spindles the central zone has spacing zones at both sides of the loading position, which spacing zones define an axial spacing between the holder compartment in its loading position and the axially adjacent holder compartments in their stacking positions.

10 15. A changer apparatus as claimed in Claim 13 ~~or 14~~, characterized in that the average screwthread pitch of the spindles in the loading position is smaller than the average screwthread pitch in the upper and the lower stacking zone.

16. A changer apparatus as claimed in ~~any one of the Claims 13 to 15~~, characterized in that the screwthread pitch of the spindles in the loading position is
15 essentially zero.

17. A changer apparatus as claimed in ~~any one of the Claims 13 to 16~~, characterized in that the average screwthread pitch in the spacing zones is greater than the average screwthread pitch in the upper and the lower stacking zone.

18. A changer apparatus as claimed in ~~any one of the Claims 13 to 17~~,
20 characterized in that there has been provided a lower and an upper guide pin for guiding the information discs into the holder compartments of the stacking unit, which guide pins are engageable into the center holes of the information discs from above and from below,
~~respectively.~~

19. A motor vehicle including a changer apparatus as claimed in Claim 1.

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